

REMARKS/ARGUMENTS

Claims 1, 2, 7, 8, 10 and 11 have been rejected under 35 U.S.C. 103 (a) as being unpatentable over Verkuil (US 5, 485, 091) in view of Hirae et al. (US 5,475,319) . Claims 3, 9 and 12 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Verkuil in view of Hirae et al. and Okada et al. (US 6,278,267). Claims 4-6 have been allowed.

In response, independent claims 1, 7 and 10 are being amended.

Method claim 1 is being amended to recite that the charging processing step, the charge amount measuring step and the surface potential measuring step are conducted while the semiconductor substrate is held on a same holding stand.

Similarly, apparatus claim 7 is being amended by adding a recitation of a holding stand operable for moving the semiconductor substrate between the charging processing unit, the charge amount measuring unit and the surface potential measuring unit.

The holding stand is illustrated by the embodiment presented, e.g., in Figure 1 and at page 18, lines 13-21.

By using the holding stand, it is easy to conduct the charge amount measuring step (C-V measurement) and the surface potential measuring step within a period of time during which the charge amount of the insulator film can be regarded as unchanged (see the specification from page 26, line 21 to page 27, line 1). These features are not taught or suggested by either Verkuil or Hirae et al.

Claim 10 is being amended by adding a recitation of a calculating unit which calculates the relative dielectric constant of the insulator film based on the charge amount measured in the charge amount measuring unit and on the surface potential measured in the surface potential measuring unit. As amended, the relative dielectric constant measuring apparatus of amended claim 10 is closely related to the relative dielectric constant measuring method of claim 4. Claim 10 should be allowed at least for the same reason claim 4 was allowed.

In general, Verkuil does not teach the charge amount measuring step and means employing the C-V measurement of the present claims. It is impossible to measure the thickness of an insulator film with a C-V measurement in accordance with any combination of the teachings of Verkuil and

Hirae et al., because the references do not identify how the C-V measuring instrument is used, nor what steps are needed in addition to the C-V measuring step.

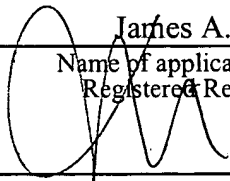
The UV irradiation of Okada et al. does not share a common technical idea with the UV irradiation described in this application. Okada et al. disclose a method of determining an impurity content. The UV (light) irradiation is performed for the purpose of neutralizing the impurities. Therefore the technical idea of Okada et al. is based on the existence of impurities in a substrate, and the method is assumed to be used in the circumstance that the impurities, for example Na, are introduced in the substrate.

However, there is little possibility that impurities like Na would be introduced in an ordinary case. Therefore, it would not be obvious to apply the method of Okada et al. to a thickness measuring method.

New claims 13 and 14 depend respectively from claims 10 and 4 and should be allowed for all the same reasons discussed above in connection with claims 1, 4, 7 and 10.

In view of the foregoing amendments and remarks, allowance is requested of claims 1-3 and 7-14, in addition to claims 4-6 already allowed.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on October 7, 2004:



Name of applicant, assignee or
Registered Representative

Signature

October 7, 2004
Date of Signature

Respectfully submitted,



James A. Finder
Registration No.: 30,173
OSTROLENK, FABER, GERB & SOFFEN, LLP
1180 Avenue of the Americas
New York, New York 10036-8403
Telephone: (212) 382-0700

JAF:msd